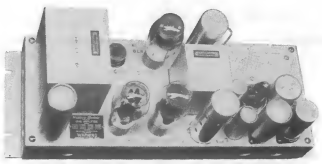
124D AMPLIFIER



GENERAL

The 124D amplifier consists of a 124A amplifier and a 116B amplifier and is a push-pull, two-stage amplifier with self-contained power supply unit and plate supply filter. It is designed for use where high gain is required, such as amplifying the output of a moving coil microphone to line or loudspeaker level. One of these amplifiers forms a part of the 103D amplifier.

ELECTRICAL CHARACTERISTICS

Gain - - - - - - 107 db.

Source Impedance - 15 to 60 ohms (30 ohms nominal). 60 to 250 ohms (120 ohms nominal).

Internal Input Impedance - High - unterminated input transformer.

Internal Output Impedance - 3/4 of nominal load impedance.

Load Impedance - 1.75, 7.5, 16, 30, 150, 600 ohms. Also 70-volt loudspeaker distribution line. See output connections table on schematic.

Output Level - - +41 dbm (12 watts) with less than 5% total harmonic distortion from 50 to 5000 cycles, and +43 dbm (20 watts) with 5% total harmonic distortion and 400 cycles with 600 ohm load.

Output Noise - - -8 dbm (unweighted).

Frequency Response - - - ±1 db 50 to 15,000 cycles.

Gain Control - - 35 db continuously variable. Paralleled remote control may be used if desired.

Power Supply - - 105 to 125 volts, 50 to 60 cycles, 1.1 amperes, 105 watts when used with 12-watt output connection. 105 to 125 volts, 50 to 60 cycles, 1.25 amperes, 125 watts when used with 20-watt output connection.

EQUIPMENT CHARACTERISTICS

Dimensions - - - 19" long, 7" high, 7-3/8" deep including controls.

Weight - - - - - Approximately 20-1/2 pounds.

Finish - - - - - Chassis: Aluminum lacquer. Front and edge of mat: black enamel, dark aluminum gray, gray or blue-gray.

Mounting - - - - Relay rack, shelf or apparatus cabinet.

ELECTRON TUBES

(These tubes are not supplied with the amplifier and must be ordered separately.)

	W.E. Co.		Commercial
2- - - - - - - -	348A	or	6J7 or 6J7G
2- - - - - - - -	350B	or	6L6 or 6L6G
1- - - - - - - -	274B	or	5T4 or 5U4G
1- - - - - - - - - - - - - - - - -			1612

REFERENCES

ESX-675954 - - - - - Assembly and Stock List.

ESX-676169 - - - - - Wiring Diagram.

ESXX-676166 - - - - Schematic.

BSP 024-104-100 - - 124-Type Amplifiers.

BSP 024-100-102 - - 103D Amplifier.

BSP 024-100-103 - - 116B Amplifier.

BSP 024-104-501 - - 103 and 124-Type Amplifiers.

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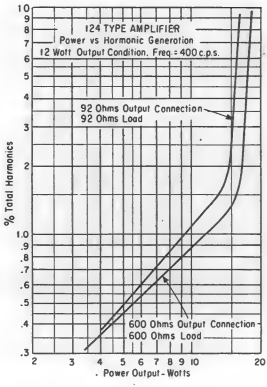
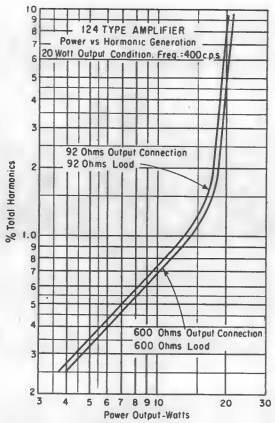
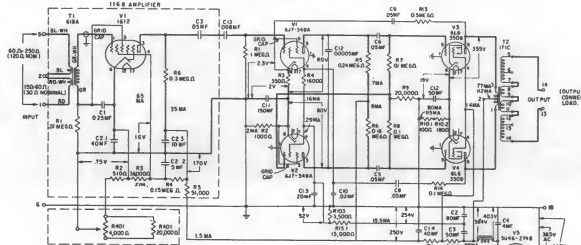




124 D AMPLIFIER



NOTES:

1. The voltages and current values shown represent typical no signal conditions for a 60 cycle power supply and are measured with Western Electric tubes and operated from a 60% 120 volt power line connected to L1, & L2 for the 20 watt connection-multiply the values shown by a factor of 1.10.

2. When the amplifier is equipped with the Bell-Western Electric type tubes indicated (including 5U4G rectifier) multiply the values shown by a factor of 1.10 for the 12 & 20 watt conditions respectively (exception: the 6L6 screen current is approximately 18mA in either case)

OUTPUT CONNECTIONS TABLE (T2)

12 WATTS OUTPUT		20 WATTS OUTPUT		Strap Terminals	Output Connections
Nominal Load Impedance	Working Range of Load Impedance	Nominal Load	Working Range of Load Impedance		
4000Ω	3200 to 5000Ω	4000Ω	3200 to 5000Ω	7-8-9-10-11-12	8 & 16
1500	700 to 1000	1000	500 to 2000	7-8-9-10-11-12-13	3 & 16
300	200 to 700	200	150 to 500	7-8-9-10-11-12	8 & 13
150	100 to 200	100	50 to 150	7-8-10-11-12	8 & 13
7.50	30 to 100	50	30 to 70	7-9-10-11-12-13	8 & 13
17.56	15 to 30	15	10.50 to 28	7-8-10-12-7-9-11-12	8 & 13

70V OUTPUT	12 & 20 WATTS OUTPUT
Screw Terminal	Output Connections
8-13	3 & 16